

# City of Santa Barbara



## Public Works Department

### Annual Report

Engineering

Transportation

Facilities & Energy

Fleet Management

Water Resources

Administration

Fiscal Year  
2012

# Director's Message



I am pleased to present to you the Public Works Department Annual Report for Fiscal Year 2012. Once again, Public Works experienced a busy and productive year. To tell our story, we have compiled this report for our community to learn and discover more about the Department's services and activities. We have included information about our Divisions, our dedicated and experienced staff, how we serve the community, and our accomplishments in 2012.

What makes Public Works unique is that we are involved in some way with the assets of every City Department, from Fleet to Facilities, from Street Maintenance to set up and post event clean ups for our community celebrations such as Solstice and Fiesta, and for most of the services and places our residents and visitors enjoy as they go about their daily lives. In this report, you will learn about the many exciting projects and world-class services we have delivered to the City of Santa Barbara and our citizens over the past fiscal year.

We are also responsible for the delivery of the City's Capital Improvement Plan program, which includes the design and construction of many large and highly visible projects. Most notably, after 18 months of construction, we cut the ribbon at the Ortega Bridge and broke ground on a multi-year construction project at the Cater Water Treatment Plant to improve the quality of the water delivered to our customers.

Public Works was also presented challenges in 2012. The dissolution of the Redevelopment Agency threatened completion of many projects already in progress and delayed projects that were not yet started. We have met the challenges by being flexible in project funding and scheduling, and recognizing the "value added" when smaller projects could be built concurrently with larger projects thus saving time and mobilization costs.

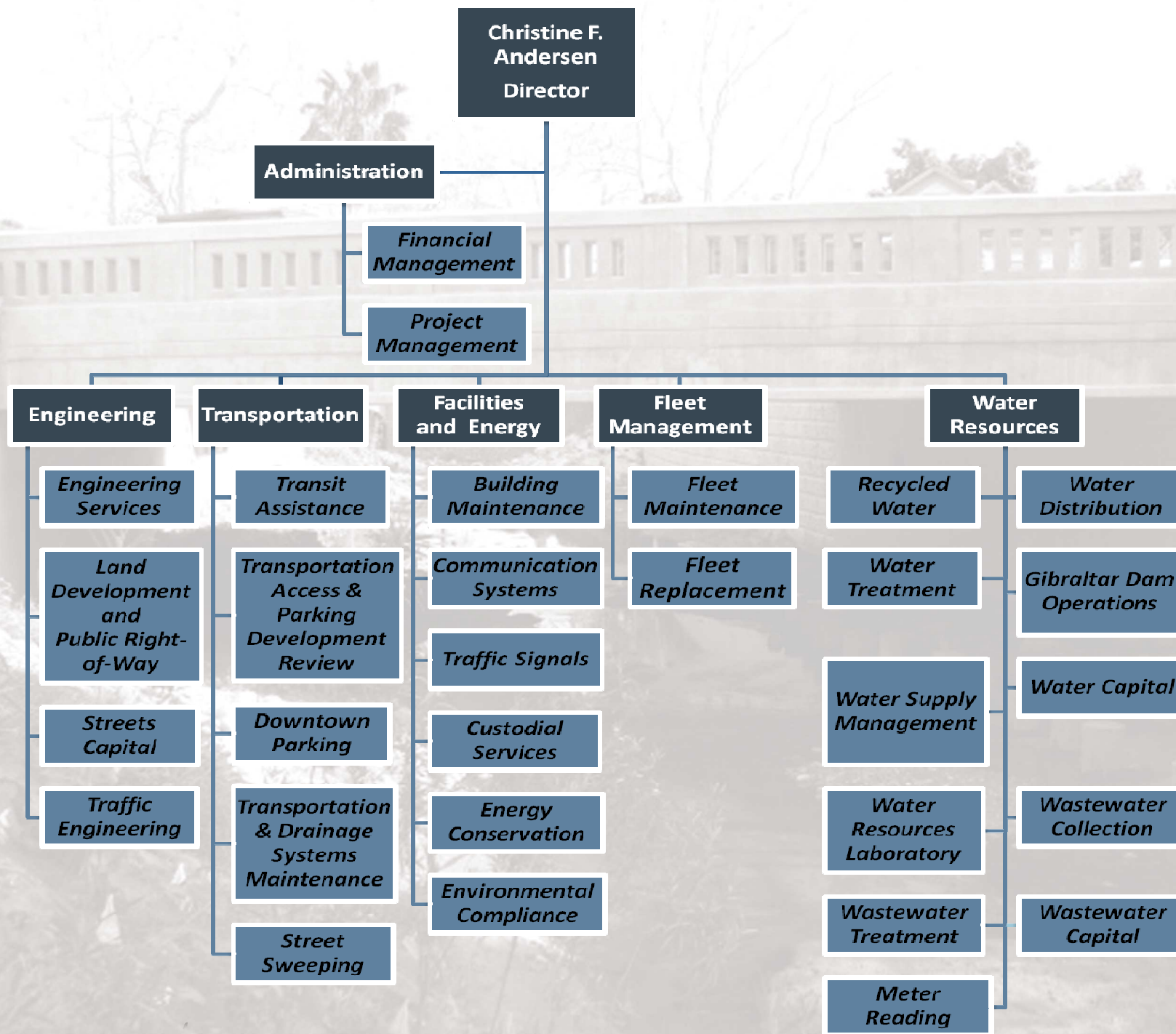
So as you read the report, think about the places you travel and visit throughout the City and the services we all enjoy. The accomplishments of the Public Works Department are above you, below you and all around you!

Looking ahead, I look forward to leading Public Works with a commitment to fulfilling our vision and commitment to providing quality services for the community. For additional information, please visit us on the web at [santabarbaraca.gov/Government/Departments/PW/](http://santabarbaraca.gov/Government/Departments/PW/).

Christine F. Andersen  
Public Works Director  
City of Santa Barbara



# Organization Overview



The **Engineering Division** of Public Works consists of four sections with cumulative total of about 50 employees responsible for the planning, management, design, and construction of the City's infrastructure and facilities.

The **Engineering Services, Land Development and Public Right of Way, Streets Capital and Traffic Engineering sections** provide outstanding customer service to Santa Barbara residents, businesses, and City client departments to coordinate and construct world class infrastructure and facilities for public use and enjoyment.

A key job for Engineering is also to efficiently design and administer construction of the larger construction projects in the City's Capital Program. Engineering completed approximately \$35M in Capital Projects during 2012.



## Ortega Street Bridge Replacement

City staff, Neighbors, and elected officials celebrated the opening of the new Ortega Street Bridge on Lower Mission Creek in January, 2012, a little over two months ahead of schedule. As part of this bridge replacement project, construction crews removed the old bridge, structures, and concrete channel walls, installed the new bridge, restored the creek bed and created fish pools, replaced utilities, paved Ortega Street and installed new sidewalks, and installed irrigation and landscaping.

Originally built in 1915, the Ortega Street Bridge did not meet current structural and earthquake safety guidelines. The new bridge is now structurally sound, and allows more water to flow under the bridge reducing flooding during severe storms. Old concrete and creek walls were removed from the channel and new landscaping and fish pool enhanced the channel for wildlife.

The majority of funding (88.53%) for the \$6.8 million Ortega Bridge Replacement project was obtained through a federal grant from the Highway Bridge Program. The remaining funding was from City Street funds, including funding from the City of Santa Barbara's half-cent transportation sales tax, Measure A.

The Ortega Street Bridge is the second bridge replaced as part of the overall Lower Mission Creek Flood Control Project. The first bridge replaced was located at the intersection of Haley and De La Vina Streets and it opened in the summer of 2011.

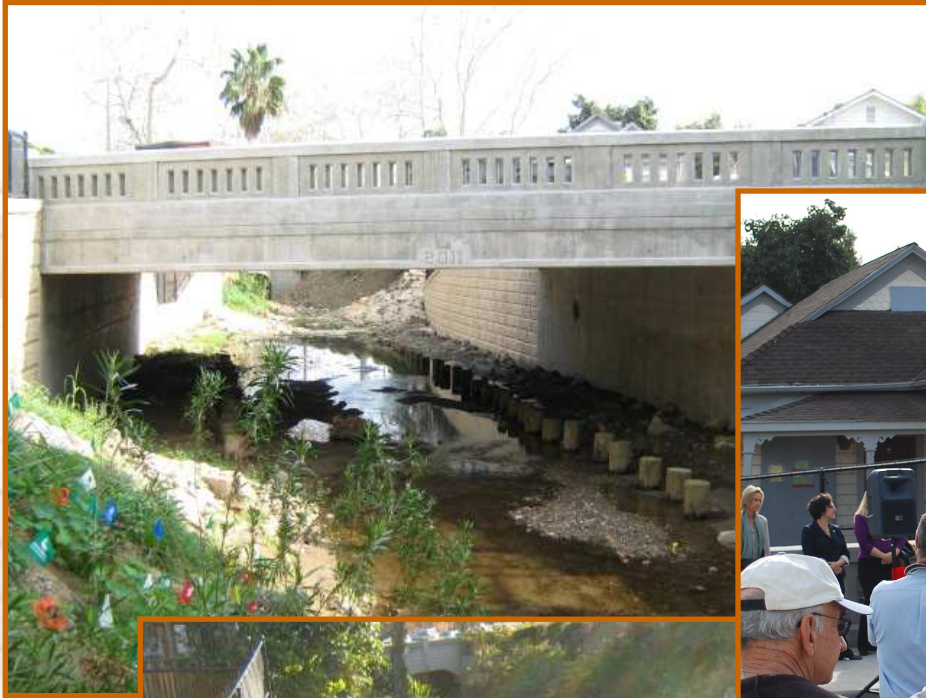
### Essential Skills...

*Public Works Engineering staff design, construct, inspect and give the final approval for larger construction projects throughout the City, but what does this really mean?*

*It means our engineers balance environmental and land use review with design requirements, keep the public engaged with what is going on in their neighborhoods, manage consultants and contractors, all the while keeping an eye on the bottom line.*



# Ortega Street Bridge Replacement



Engineering



## Fire Station #1 Annex Renovation

In 2011, seismic safety and modernization upgrades to Fire Station #1 were completed, but space for the Administrative staff and warehousing space was lacking. Following feasibility studies, it was decided that the most efficient way to house Fire's staff was to utilize a historic building (constructed in 1928) adjacent to Fire Station #1 that formerly served as the City's main fire station. The City has owned the building since the 1950's but had leased most of the building to tenants who operated a muffler shop at the location for many years.



How do you reuse and restore an industrial building that was previously used for many years as a muffler shop and remodel it to house the Fire Department's administrative staff, provide warehouse space for the Santa Barbara Fire Department, AND make it a "green" building? Public Works Engineering, working with all the key stakeholders, made it happen!

The interior of the existing building before renovations was dark and cavern-like. Because of the building's age, the City's Historical Landmarks Committee required the exterior improvements to maintain the character of Downtown Santa Barbara and be complimentary to the historic nature of the building. The building needed to be easily maintained and durable

to satisfy the functional requirements of the Fire Department.

During construction as much nonhazardous demolition and construction waste as possible was salvaged and recycled. Work on the building included seismic, mechanical, and electrical upgrades, removal and replacement of over half the concrete floor slab, installation of office components, furniture, a security system, doors windows, heating, ventilation, gate installation, roof replacement and landscaping as well as upgrades to comply with American with Disabilities Act (ADA) requirements.

The interior of the building was opened up by exposing and refurbishing the existing steel roof trusses and wood decking. The exterior walls of the existing building offered minimal access to natural light, so skylights were installed in the administrative area. To bring in more light, the interior offices were fronted with translucent glass.

The office space is approximately 4,500 square feet and the warehouse is approximately 4,400 square feet, for a combined area of just under 10,000 square feet that will support existing and future public safety needs. Upgrades and seismic reinforcement of this existing structure has now created office space for Fire Administration, the Fire Prevention Bureau, and has modernized the existing department warehouse/storage facility that is easily accessed from the rear of Fire Station # 1.

### But It's a Fire Station...

*Public Works Engineering operates as a consultant to other City Departments (such as the Fire Department - called "client" Departments). Much like a contractor or consultant, Engineering assists client Departments in designing and building or updating City facilities.*

*So when you see announcements for new City structures and facilities, it's likely that the Engineering Division played a major role in its development.*



# Fire Station #1 Annex Renovation



Engineering



## Conejo Slide Area Repairs

Landslide activity in the Conejo Road area, located in the City's east Riviera neighborhood, has been documented since the late 1960s. Since the first reported movement in 1969, significant slide movement has been documented in the winters of 1978, 1983-1984, 2004-2005, and 2011, generally corresponding with years of heavy rainfall. The active slide mass, which bisects Conejo Road at two different locations, was first mapped in 1983.

March of 2011 brought unusually heavy rains to Santa Barbara County. During and immediately following the rains, the Conejo landslide was re-activated and the downward movement of the slide damaged a portion of Conejo Road. The slide fractured the road surface so that a portion of Conejo Road was closed to through traffic for approximately 10 days. Additionally, due to the ongoing earth movement, portions of Conejo Road had moved outside of the City's right of way and one portion exceeded a 16 percent slope, limiting emergency response vehicle accessibility. Maintaining emergency access and utility services to area residents was paramount. Public Works staff worked closely with the Fire Department and both City and non-City utility providers to restore access and maintain safe and reliable public services to residents in the Conejo Road area as quickly as possible. Once the movement subsided, City Streets crews were able to repair Conejo Road and restore public access.



The road repairs consisted of reconstructing a portion of the road and relocating it back within the City's right of way. The roadway was rebuilt by using geofoam, a lightweight foam fill, to restore accessibility of emergency response vehicles. The use of geofoam was recommended by a geotechnical specialist in order to minimize the weight of the fill added to the existing slide mass. Drainage improvements were also included to divert storm water away from the slide area.



Additionally, to prevent disruption of wastewater service for customers in the area, staff closely monitored sewer pipes affected by the ongoing earth movement. A project was subsequently developed to realign the existing sewer main across private property in order to divert the majority of the sewer flow outside of the active slide area. Staff contacted affected property owners and negotiated an acceptable purchase agreement for an easement to relocate a portion of the sewer main onto private property. This sewer main diversion increases the reliability of wastewater service to area residents and minimizes ongoing maintenance needs by removing the sewer pipe from within the active landslide area.

While the Conejo Road repairs and sewer line relocation projects have addressed damage done by the slide in the City's public right of way, Public Works staff continue to monitor the slide's movement through regular surveying efforts.







The **Transportation Division** of Public Works consists of four sections:

**Transit Assistance** promotes, supports, and develops alternative forms of transportation,

**Transportation Access and Parking Development Review** accomplishes transportation program planning and financing to meet the future mobility needs of the City,

**Downtown Parking** manages the City parking facilities to support parking availability for downtown customers and to provide downtown employees a wide range of parking and alternative transportation options, and

**Streets Maintenance** maintains 250 centerline miles of paved streets, maintains pavement markings, street and traffic signs, curbs and gutters, sidewalks, and the storm drain system, as well as accomplishing neighborhood cleanups, removing abandoned furniture and debris, abating graffiti, and providing set up and clean-up services, supplies, and barricades for community events such as Solstice and Fiesta.



## Lot 2 Structural Upgrades

Structural upgrades to Parking Lot 2, with entrances on Canon Perdido and Chapala Streets, began on February 6, 2012 and was completed in May. Temporary signs were installed to redirect traffic to neighboring City parking Lots 3, 4, 9, and 10, and the Paseo Nuevo garage. While Lot 2 was closed, monthly parking permit holders were permitted to park in any other available downtown City parking lot.

Repairs were necessary to enhance the seismic stability of the structure and improve public safety. Construction work involved repairing, reinforcing, and supporting concrete beams, columns, and girders, and bringing the handicapped accessible parking spaces into compliance with ADA requirements.



Other work performed during the closure included a complete renovation of the elevators, replacement of the deck sealant on the second level of the garage that is also the roof for First Republic Bank, power-washing of all floors, and a new coat of paint for the garage's interior.

## Our Ambassadors...

*Downtown Parking employs approximately 100 Hourly individuals as Lot Operators who staff the City's downtown parking kiosks.*

*Lot Operators undergo a rigorous and on-going training program emphasizing customer service with continual support from our experienced Downtown Parking Supervisor.*

*Training emphasizes accuracy and efficiency in collecting parking fees, but also trains Operators to act as our City's ambassadors when it comes to our customers.*

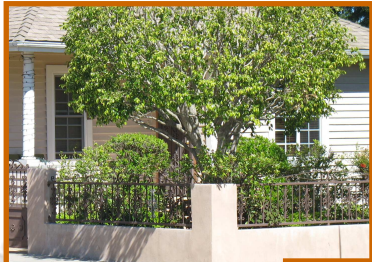
*Next time you visit one of the Downtown Parking lots, ask for directions...you'll get accurate information and a friendly smile!*



## Sidewalk Infill and Access Ramps

The Sidewalk Infill Program is one of Public Works annual programs funded by the Community Development Block Grant (CDBG) and Measure A. Missing sections of sidewalk are “filled in” and access ramps added at street corners to improve pedestrian access and conform to requirements of the federal Americans with Disabilities Act. The locations selected for sidewalk infill are high priorities because they are pedestrian routes to local schools.

This year new sidewalks and access ramps were installed along the 800 block of East Carrillo Street, at the intersection of West Sola Street and Chino Street, along the southeast side of the 600 block of West Sola Street, and along the northeast side of the 1200 block of Gillespie Street.



Before



After

## Street Maintenance Union Pacific Graffiti Abatement

The Public Works Department, Transportation Division accomplished the annual Union Pacific (UP) railroad corridor clean up in June 2012. The annual railroad corridor clean up is accomplished by City Streets crews, the California Conservation Corps (CCC), who provide the labor, and UP flagmen, who provide safety protection while the crews work in proximity to the railroad tracks. The crews trimmed trees and shrubs, chipped the brush and spread it to suppress weeds and removed debris left by homeless encampments and illegal dumping.

The annual clean up is a joint project of the City and UP under a Memorandum of Understanding (MOU) that was drafted in 2006. Under the MOU, UP reimburses the City for the entire cost of hiring the CCC labor crew and equipment, and also reimburses the City for graffiti abatement performed year round by the City's Street Maintenance crews.



Before



After



**Building Maintenance:** Provides operational, maintenance and construction services to City owned facilities to maintain a clean, safe and functional environment in which to conduct City business;

**Electronic Maintenance:** Provides and maintains the citywide radio, telephone, microwave, Combined Communication Center (911), and associated electronic communication systems, ensuring uninterrupted high quality communication operations, and a safe, efficient and reliable Citywide Traffic Signal System Network;

**Custodial Services:** Provides custodial service to City-owned facilities to ensure a clean and safe environment for staff and the public;

**Energy Conservation:** Provides energy efficiency and conservation management program, energy generation project management, and electrical and gas utility coordination for all City departments; and

**Environmental Compliance:** Properly manages and disposes of hazardous materials, and complies with State regulations applying to City-owned and operated fueling stations with Underground Storage Tanks, Leaking Underground Fuel Tanks and Site Mitigation Units.

## Energy Efficiency Upgrades Save \$\$\$

In 2009, the City received an \$868,200 Energy Efficiency and Conservation Block Grant (EECBG) through the American Recovery and Reinvestment Act. The City used the funds to upgrade old Heating Ventilations and Air Conditioning (HVAC) equipment, install new building controls, upgrade sports lighting and partially fund the City's Climate Action Plan.

Projects completed in FY 2012 include HVAC upgrades at the Central Library, the Eastside Library, the Franklin Center, the Westside Center, City Hall, 1235 Chapala Teen Center and the Parks and Recreation administration buildings. Additionally, the sports lighting was upgraded at the Dwight Murphy ball field. Collectively, the projects are projected to save 526,000 kWh and \$81,000 annually. Also, based on the U.S. Department of Energy's calculations, this effort has created or retained 10 jobs in the community.

One highlight of the EECBG projects was the installation of a variable frequency drive (VFD) in a large multi-zone HVAC unit at the Central Library. A VFD saves power by accurately varying motor speed to accommodate the load, rather than running constantly at the highest speed necessary. The City also received a significant incentive (\$6,000) from SCG for the VFD due to the energy saved annually.

The success of the Central Library's HVAC upgrade and VFD installation yielded the following results:

- 32% reduction in electricity use;
- \$32,000 annual energy reduction;
- \$6,000 annual natural gas savings; and
- Improved ventilation and temperature control.







Fleet's mission is to manage the motorized fleet and fleet support services to cost effectively provide safe, reliable vehicles and equipment for all City departments. The following Programs are administered by Fleet Management:

- Pool Vehicle Program, Fleet Renewal and Vehicle Replacement,
- Alternative Fuel Vehicles,
- Fueling Service and Infrastructure, and
- Environmental Compliance.

## Greening the City's Fleet One "Leaf" at a Time



The Fleet Maintenance Program is designed to not only insure that the vehicles are safe and reliable, but is also intended to maximize the availability of the City's 480 vehicles and equipment and preserve the capital value of the equipment.

One tool that the City uses to cost effectively meet the City's vehicle needs is a vehicle pool system where the vehicles are shared by numerous users. This approach has allowed Fleet Management to meet the City's vehicle needs with fewer vehicles. Recently the pool approach was applied to some of the Public Works Department's large trucks .

Fleet Management is responsible to manage the City's alternative fuel program and lead the effort

to make the City's vehicles more economical and sustainable, by adding two all electric Nissan Leaf's to the City's pool vehicle fleet. The Leaf's use no gasoline and produce no tailpipe emissions, resulting in cleaner air and a reduction in greenhouse gas emissions. As part of the cost savings strategy, The City was able to take advantage of tax credits and rebates totaling \$9,500 per vehicle.

Environmental and Regulatory compliance is another important area that falls under Fleet's area of responsibility. Fleet has recently completed a program to clean up diesel exhaust emissions for all on road diesel vehicles in advance of requirements by the California Air Resources Board and is currently working on the second phase of the program for all off-road diesel powered equipment.

The Fleet Renewal program insures timely vehicles and equipment replacement before the vehicles become unreliable or costly to maintain. Fleet staff maintain an ongoing 20 year projection of vehicle and equipment needs to assist the City in budgeting and planning for future needs. In addition, fleet staff provide engineering services to make sure that City staff have the right equipment that they need in order to do their jobs.







**Water Treatment** Section of the Water Resources Division is responsible for administering the City's potable water and recycled water systems. This includes the planning, treatment and reliable distribution of high quality water at a reasonable price.

## Cater Water Treatment Plant Advanced Treatment Project

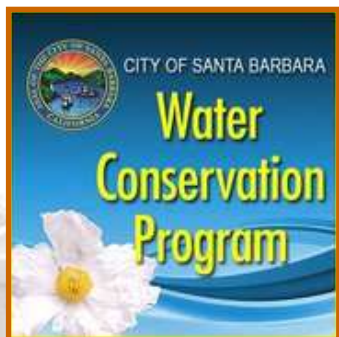
The Cater Water Treatment Plant (Cater) treats the water for the City of Santa Barbara and the Montecito and Carpinteria Valley Water Districts. Construction on the multi-year project began this year and is the culmination of many years of work to determine the best solution for the South Coast water agencies to comply with the upcoming Stage 2 Disinfection By-Products Rule (Stage 2 Rule), which will lower the allowable level of disinfection by-products (DBPs) in drinking water.

The Project is a centralized solution for addressing the Stage 2 Rule that includes the installation of an ozonation facility at Cater, along with supporting chemical stations and a dewatering facility. The Project will also include replacing four booster pumps that supply the water to the Montecito and Carpinteria Valley Water Districts via the South Coast Booster Pump Station.

The Project is being funded through a 20-year, State Revolving Fund Loan and construction will continue into 2014.







The City of Santa Barbara is a long-term leader in water conservation going back to the City's Water Conservation Program kick off in response to the drought in the late 1970's. The current Water Conservation Program is a combination of the City's commitment to carrying out the California Urban Water Conservation Council's Best Management Practices and the City's dedication to water conservation as an element of the City's Water Supply Plan.

The City of Santa Barbara Water Conservation Program seeks to increase public understanding and awareness of water conservation information, practices, and services.

## Smart Landscape Rebate Program

The Smart Landscape Rebate Program launched this past fiscal year is designed to conserve water by replacing turf and other high water demand landscaping with drought tolerant plants. The Program offers rebates on approved irrigation equipment and landscape materials including:

- Irrigation Equipment: 50% of the cost of drip irrigation, sprinkler system efficiency retrofits, rotating sprinkler nozzles, and equipment for a laundry to landscape graywater system.
- Water-Wise Plants and Mulch: 50% of the cost of water-wise plants and mulch.
- Smart Irrigation Controllers: 50% of the cost of a smart irrigation controller.

Any combination of irrigation equipment and planting costs may qualify for a one-time rebate of up to \$1,000 for single family homes and up to \$2,000 per account serving irrigated area (\$4,000 per site) for commercial, multi-family, and HOAs. Projects must be approved in advance and landscapes for new construction are not eligible. Sales receipts and/or contractor invoices are required for all rebates.

Before:



After:







The **Wastewater** Section of the Water Resources Division is responsible for the wastewater (sewer) collection system, and the treatment of wastewater to protect our environment and public health and safety.

## Sewer Main Annual Repairs

The wastewater collection system of the City of Santa Barbara dates back to 1870. The system includes 277 miles of sewer piping, 10 inverted siphons, 9 pumping (lift) stations, their associated pressurized force mains, and over 7,000 access structures (manholes and cleanouts). It is estimated that there are more than 350 miles of private "house laterals", most of which are 4 inch in diameter. The City-owned collection system piping varies in diameter from 4 to 42 inches.

The primary goal of the City of Santa Barbara, Wastewater Collection staff is to prevent sewer spills. To achieve this goal, the City has implemented a number of programs including rehabilitation and replacement of sewer main collection lines that are in poor condition.

In 2012, the City:

- Cleaned 180 miles of the sewer collection system,
- Replaced or rehabilitated 7.15 miles (2.5%) of the wastewater collection system, and
- Completed 54 "point" repairs throughout the City.





## Headworks Screening Replacement Project

The Headworks Screening is the first stage of preliminary treatment at the El Estero Wastewater Treatment Plant (EEWTP). Screening captures large and non-soluble solids at the intake of EEWTP which has a direct impact on the overall efficiency of the wastewater treatment process and energy use at the EEWTP. Solids passing into the wastewater treatment process affect the quality of treatment and lengthen the treatment time. The screens and solids removal system had reached its useful life, and was in need of replacement.

Due to limited space at the EEWTP, and that the hauling/compaction area for the screened material is at a substantially higher elevation than the screens, a replacement design was challenging. Design challenges also included the need to address construction sewerage bypassing of all incoming waste stream during construction to maintain uninterrupted wastewater disposal service for our customers.

Mechanical fine screening equipment, the treatment plant's main inlet valve, miscellaneous isolation valves, and a major the motor control center are being replaced as part of the Project. The new Headworks mechanical equipment is expected to be complete in Fiscal Year 2013 and will result in more efficient solids removal and decrease plant energy needs.



## Large Diameter Pipe Inspection

The Wastewater Section inspected sections of the wastewater collection system pipeline in the Westside and Eastside neighborhoods and Waterfront area of Santa Barbara during January and February of 2012. Work was scheduled during the nighttime hours to avoid disrupting traffic and businesses during the day.

The purpose of the project was to inspect the condition of the City's larger diameter pipes of the wastewater collection system. The City's hydro-vacuum cleaning truck, Closed Circuit Television Inspection van, and a City contractor joined together to complete the inspections.





## City of Santa Barbara Public Works Department

**Office Location:**  
630 Garden Street  
Santa Barbara, CA 93101

**Mailing Address:**  
P.O. Box 1990  
Santa Barbara, CA 93102-1990

**Phone Number: (805) 564-5377**

### Office Hours

**7:30 A.M. to 5:00 P.M., Monday thru Thursday and  
7:30 A.M. to 4:30 P.M., alternate Fridays**

### Permit Counter Hours

**8:30 A.M. to 5:00 P.M., Monday thru Thursday and  
8:30 A.M. to 4:30 P.M., alternate Fridays**

**For emergency after hours or weekend water or sewer line breaks,  
or to report street flooding call  
(805) 963-4286**

***For all other emergencies please call 911***